

# KIC 006188286

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006188286-01	OBS	No	218.755193	192.179190	309.6	15.597	7.2	6.8	4.46	10949	8.57	231.74

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006188286-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

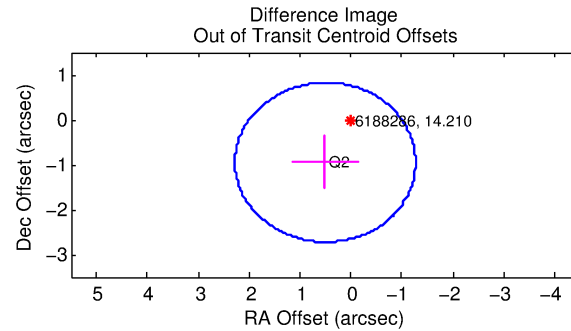
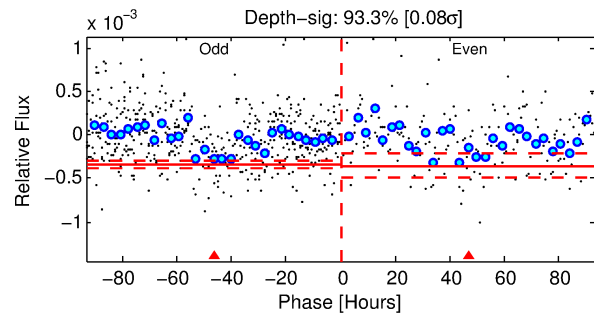
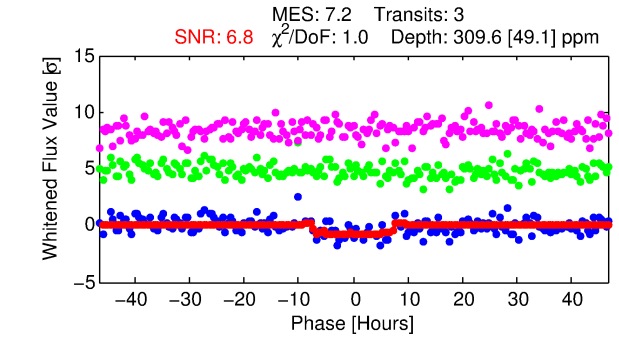
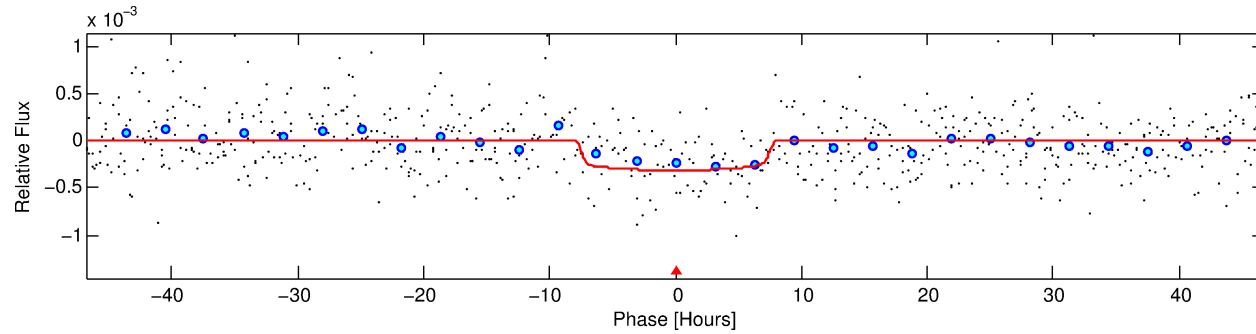
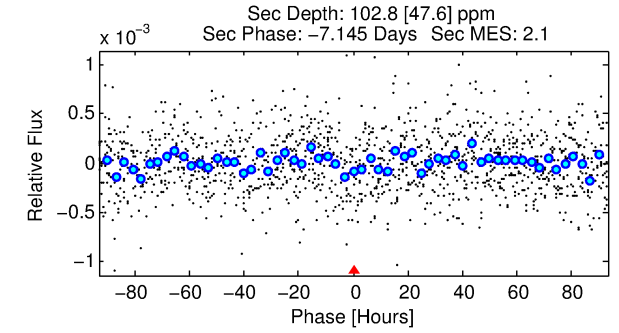
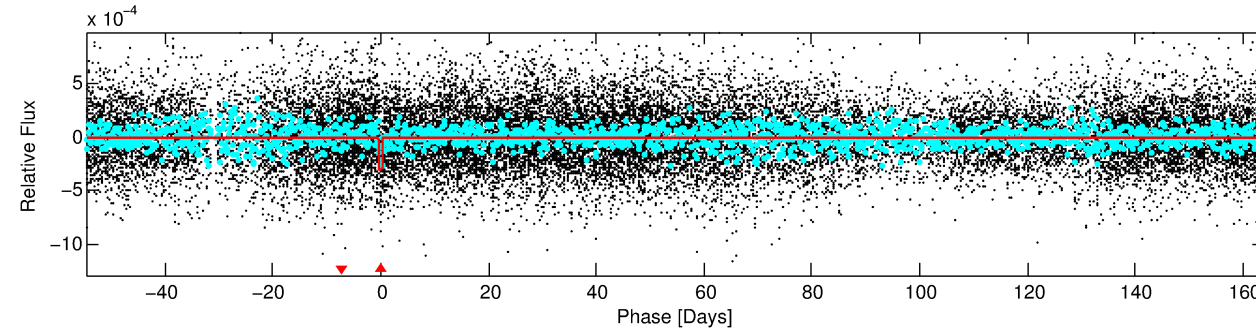
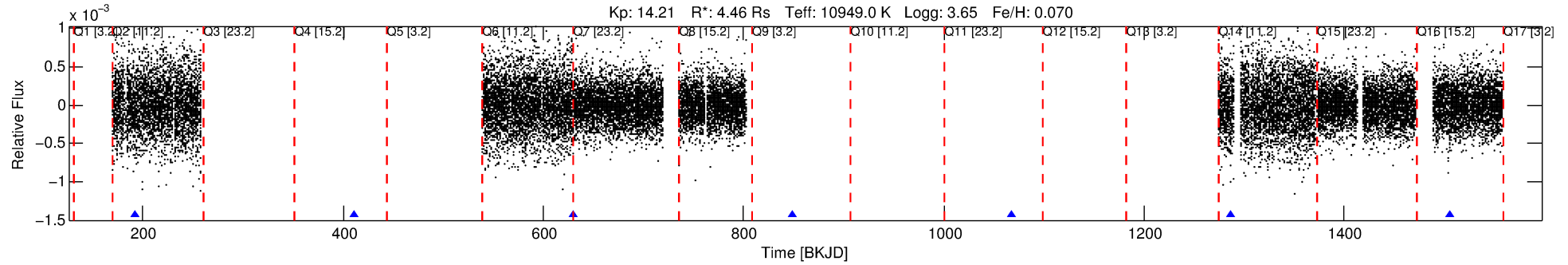
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006188286-01

No Significant Match Found

# DV One-Page Summary

KIC: 6188286 Candidate: 1 of 1 Period: 218.755 d



## DV Fit Results:

Period = 218.75519 [0.00530] d  
Epoch = 192.1792 [0.0265] BKJD  
Rp/R\* = 0.0176 [0.0032]  
a/R\* = 71.44 [91.42]  
b = 0.77 [0.68]  
Seff = 231.74 [189.72]  
Teq = 995 [204] K  
Rp = 8.57 [4.41] Re  
a = 1.0525 [0.5128] AU  
Ag = 853.38 [846.03] [1.01 $\sigma$ ]  
Teffp = 8314 [1271] K [5.68 $\sigma$ ]

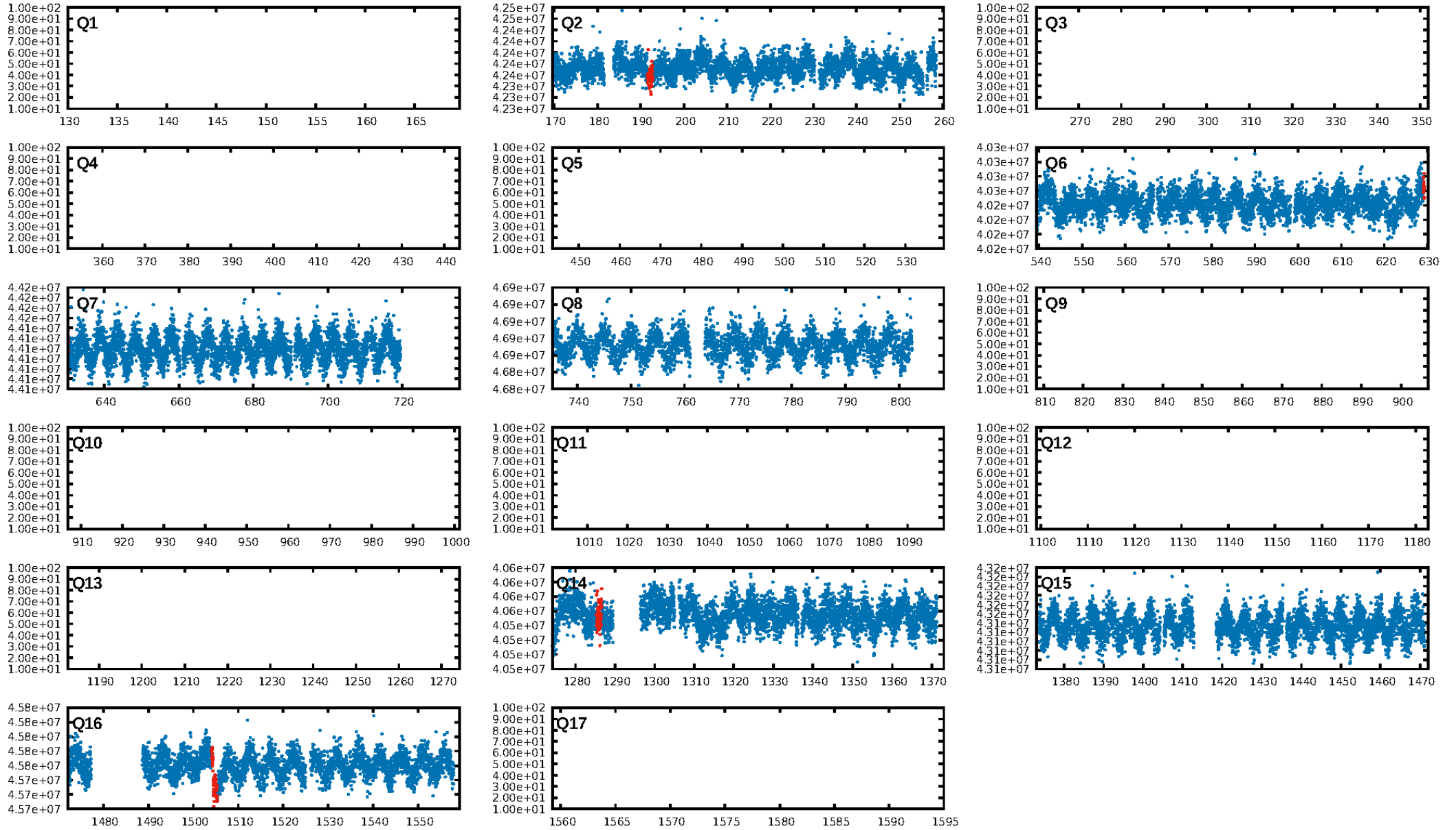
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 36.0%  
ModelChiSquareGof-sig: 99.8%  
Bootstrap-pfa: 1.70e-16  
RollingBand-fgt: 1.00 [3/3]  
GhostDiagnostic-chr: -0.1655  
Centroid-sig: N/A  
Centroid-so: 0.677 arcsec [0.62 $\sigma$ ]  
OotOffset-rm: 1.073 arcsec [1.81 $\sigma$ ]  
KicOffset-rm: 1.059 arcsec [1.76 $\sigma$ ]  
OotOffset-st: 1/0/0/0 [1]  
KicOffset-st: 1/0/0/0 [1]  
DiffImageQuality-fgm: 1.00 [1/1]  
DiffImageOverlap-fno: 1.00 [2/2]

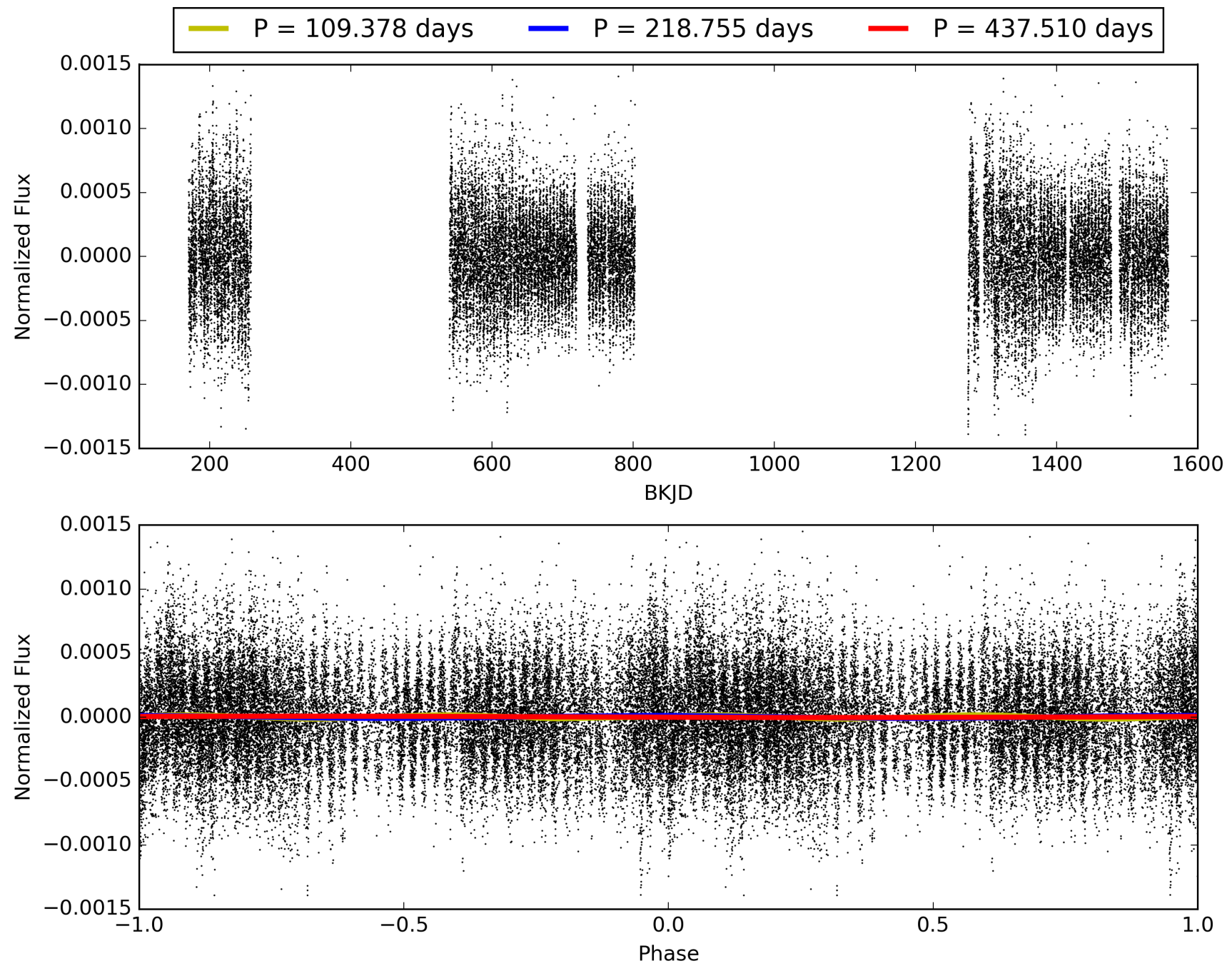
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:45:10 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006188286-01, PDC Light Curves

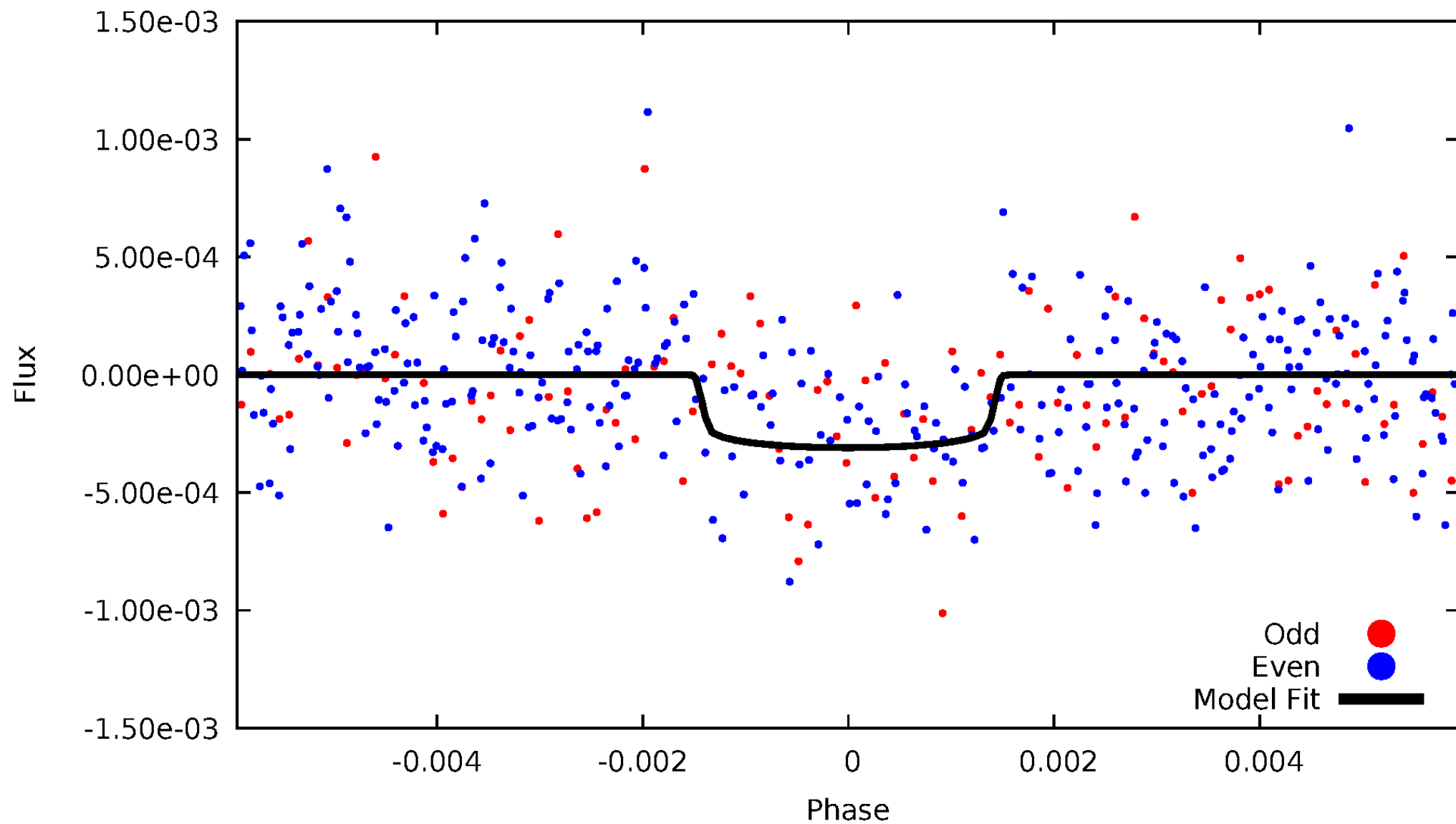


TCE 006188286-01



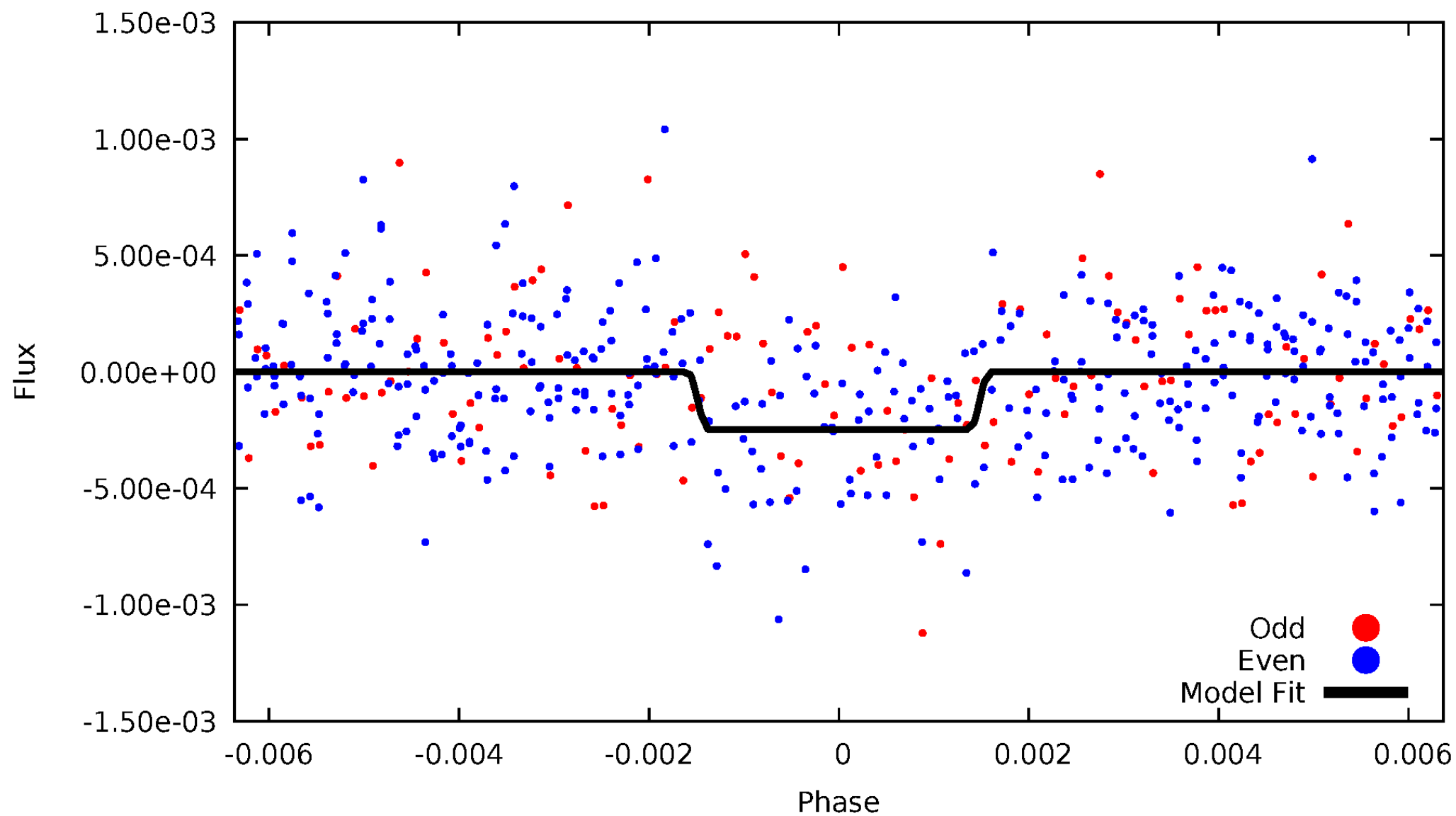
# DV Odd/Even

TCE 006188286-01



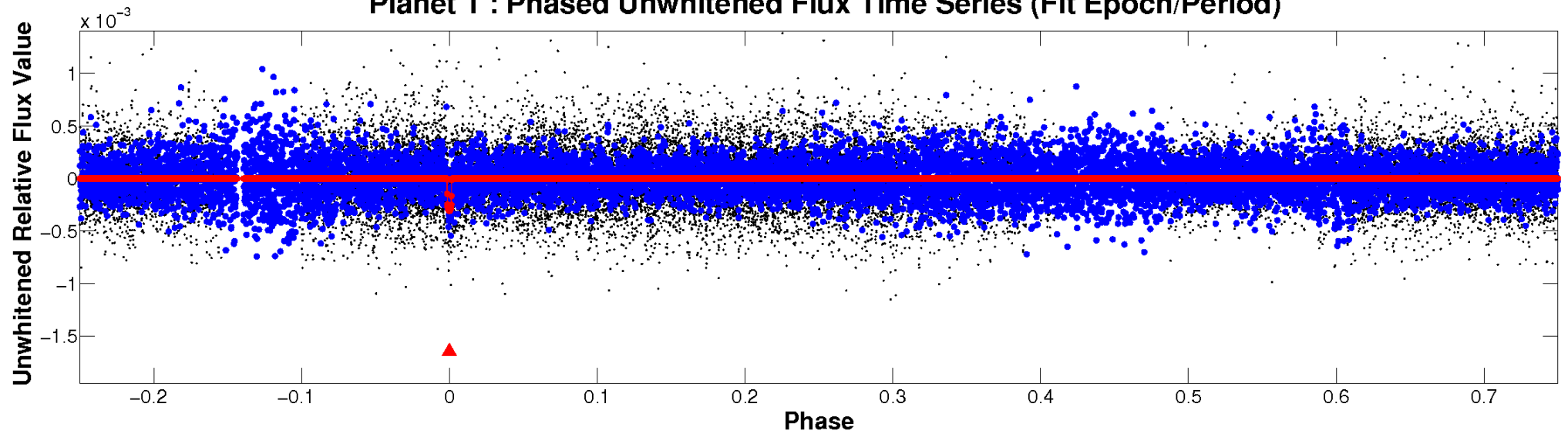
# ALT Odd/Even

TCE 006188286-01

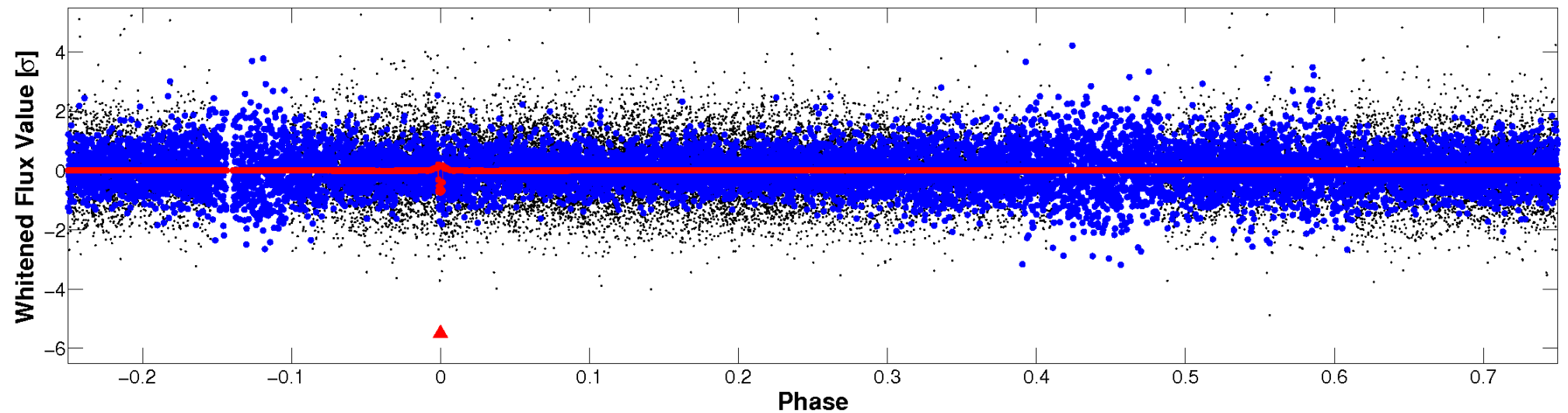


# Non-Whitened Vs. Whitened Light Curve

**Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)**



**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

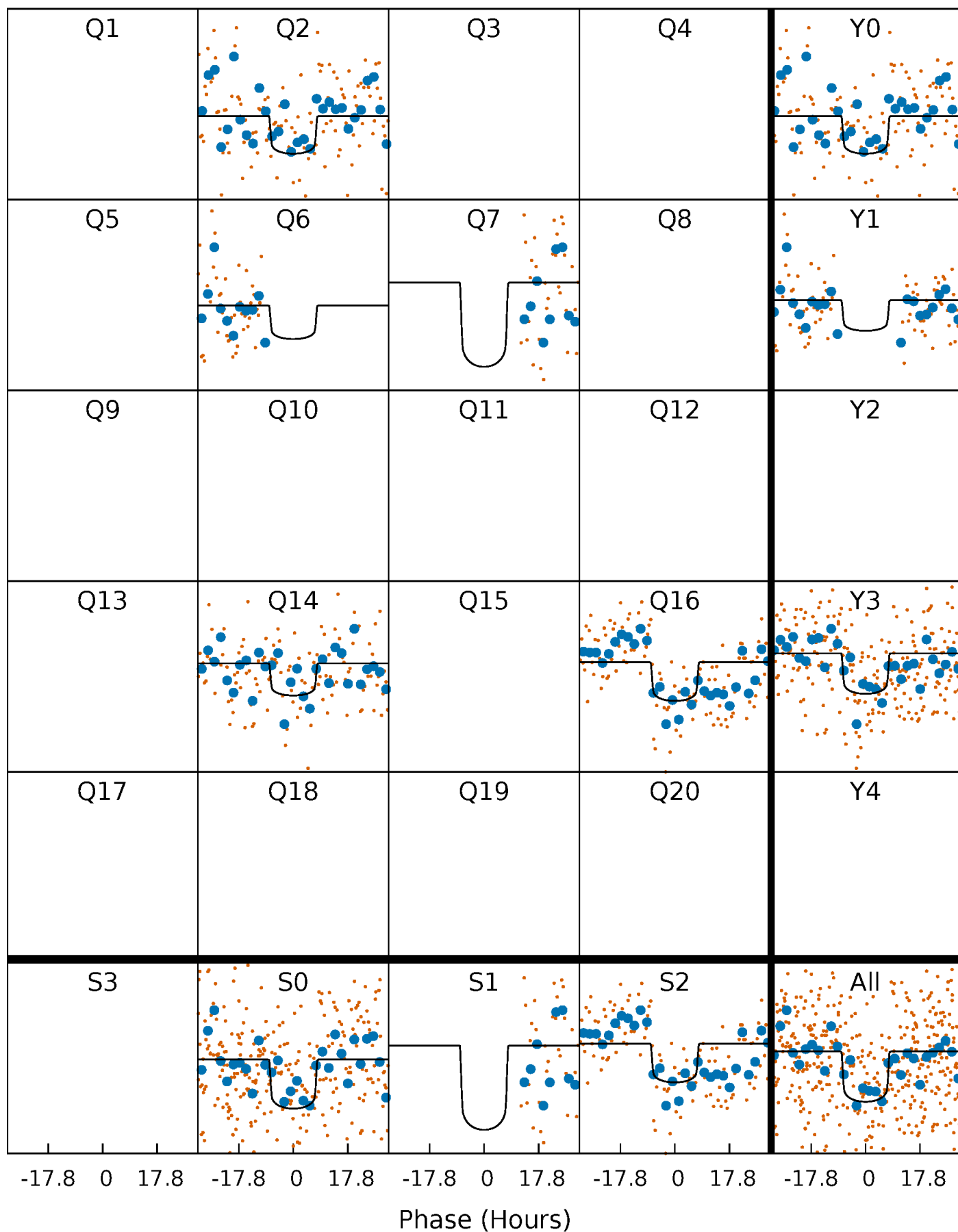
TCE 006188286-01 P=218.755193 Days  $T_0=192.179190$  (BKJD)





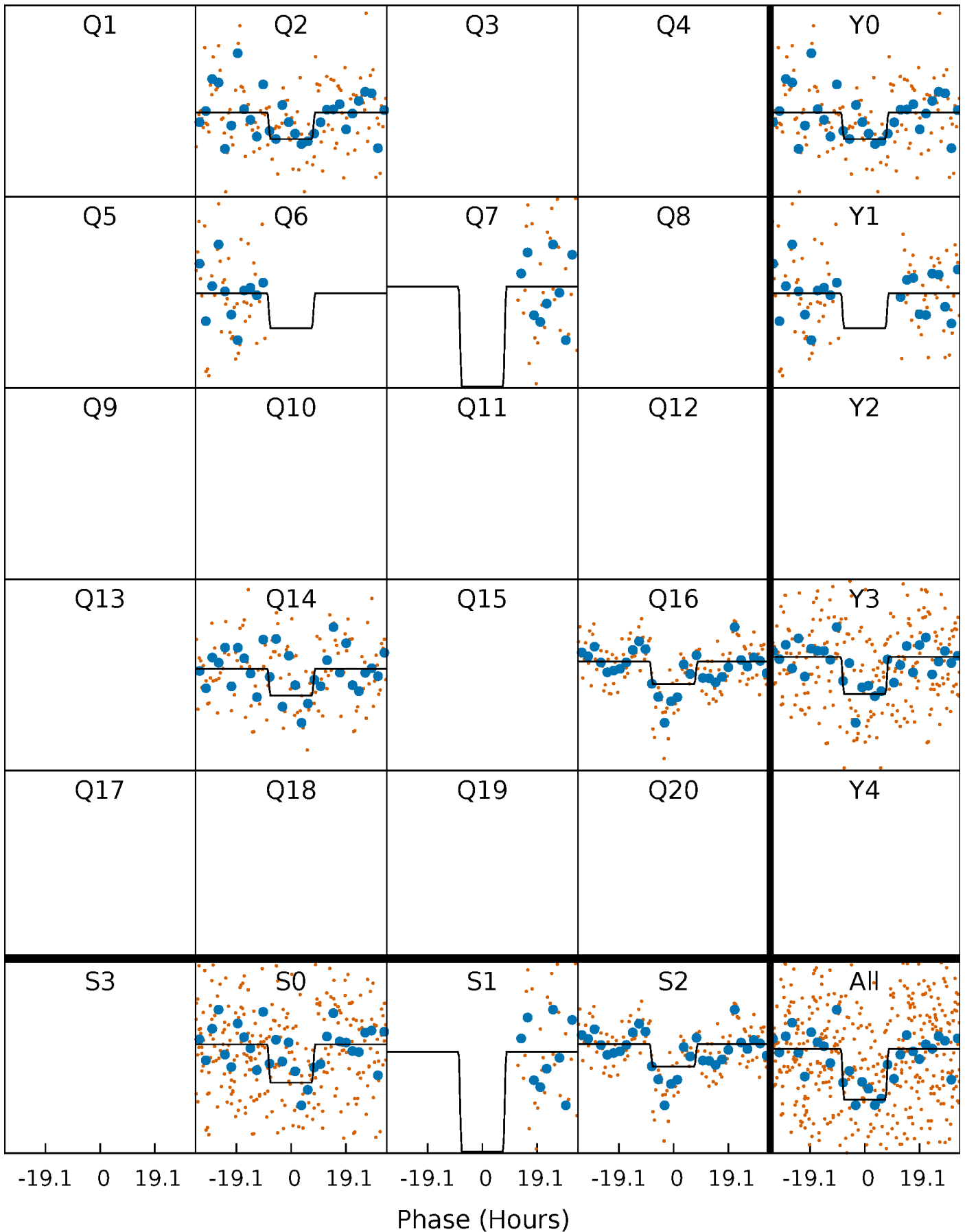
# DV Quarter-Phased Transit Curves

TCE 006188286-01 P=218.755193 Days  $T_0=192.179190$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

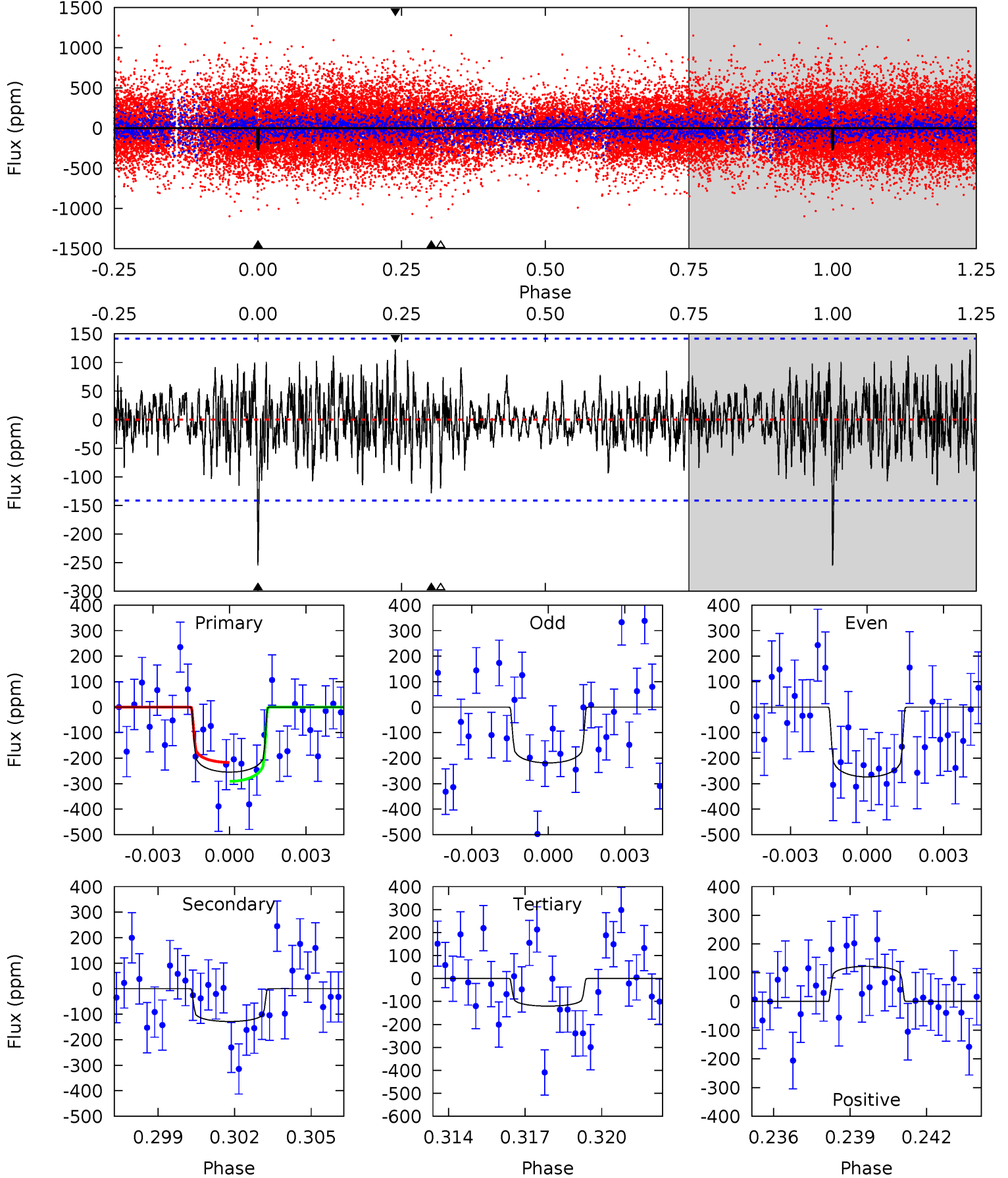
TCE 006188286-01 P=218.761693 Days  $T_0=192.153795$  (BKJD)



# DV Model-Shift Uniqueness Test

006188286-01, P = 218.755193 Days, E = 192.179190 Days

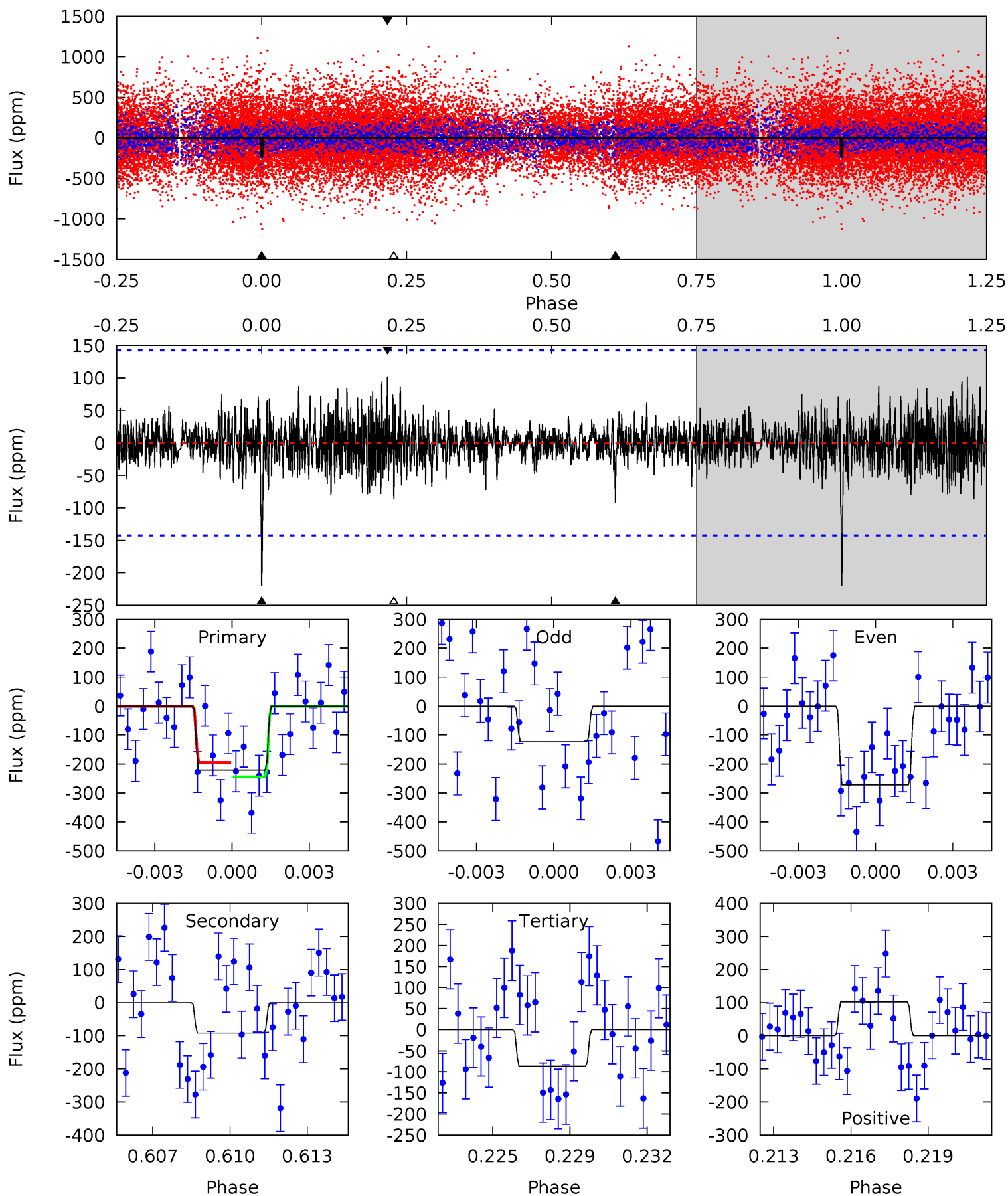
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.45	4.77	4.46	4.54	5.25	2.97	1.39	4.99	4.92	0.31	0.24	0.96	1.17	0.32	1.38



# Alt Model-Shift Uniqueness Test

006188286-01, P = 218.761693 Days, E = 192.153795 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.12	3.39	3.20	3.77	5.24	2.95	0.94	4.92	4.36	0.19	-0.38	2.54	1.04	0.32	0.91



### Stellar Parameters For KIC 006188286

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$10949^{+258}_{-480}$	$3.650^{+0.477}_{-0.080}$	$0.070^{+0.150}_{-0.600}$	$4.465^{+0.538}_{-2.153}$	$3.249^{+0.105}_{-0.944}$	$0.051^{+0.246}_{-0.014}$
	+2%/-4%	+13%/-2%	+214%/-857%	+12%/-48%	+3%/-29%	+478%/-27%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006188286-01 / KOI

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-129 \pm 27$	$7.80^{+1.96}_{-2.29}$	$1340^{+93}_{-166}$	$7999^{+1323}_{-887}$	$1279^{+1206}_{-527}$
Alt.	$-92 \pm 27$	$6.96^{+1.84}_{-2.00}$	$1348^{+91}_{-165}$	$7697^{+1425}_{-1031}$	$1073^{+1198}_{-464}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

## DV Centroid Data

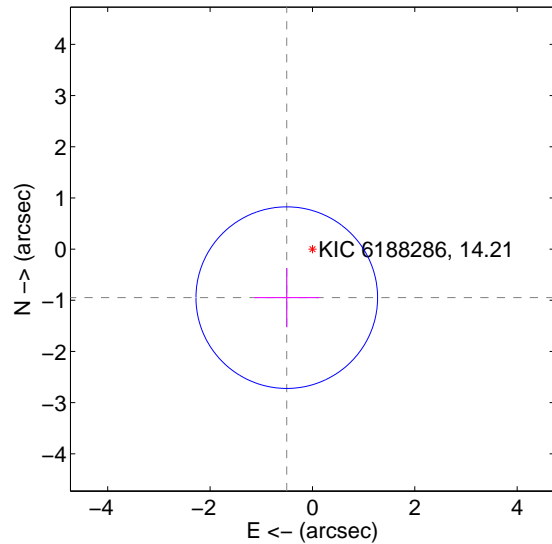
Supplemental centroid analysis for 006188286-01. Kepler magnitude: 14.21. Transit SNR 6.83

There are 1 quarters with good PRF difference image offsets

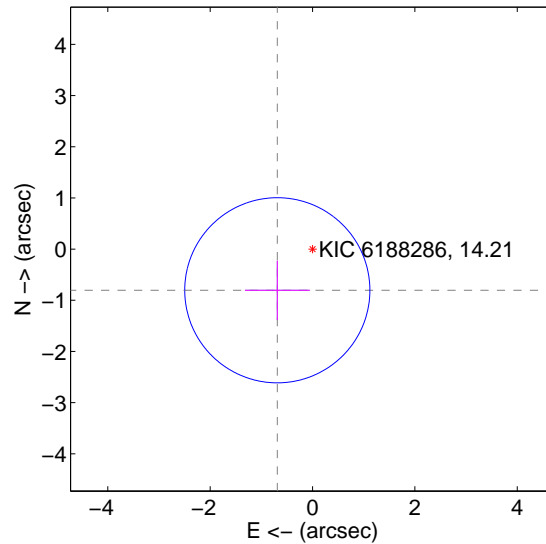
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$1.073 \pm 0.591$	1.81	$0.501 \pm 0.634$	$-0.949 \pm 0.579$
PRF-fit source offset from KIC position	$1.059 \pm 0.603$	1.76	$0.688 \pm 0.634$	$-0.804 \pm 0.579$
photometric centroid source offset	$0.68 \pm 1.09$	0.62	$0.67 \pm 1.08$	$-0.11 \pm 1.36$

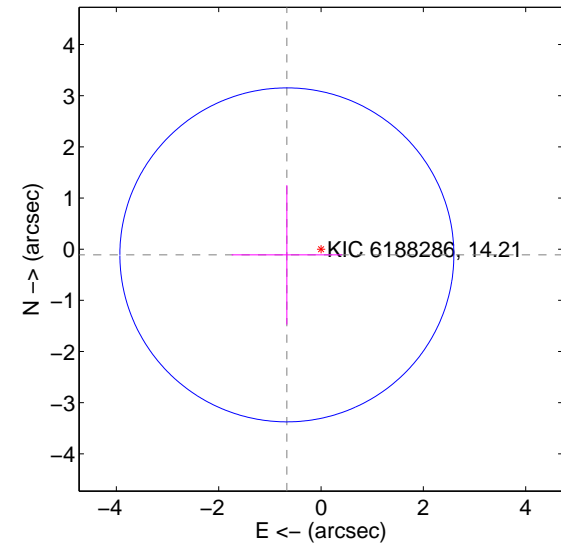
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

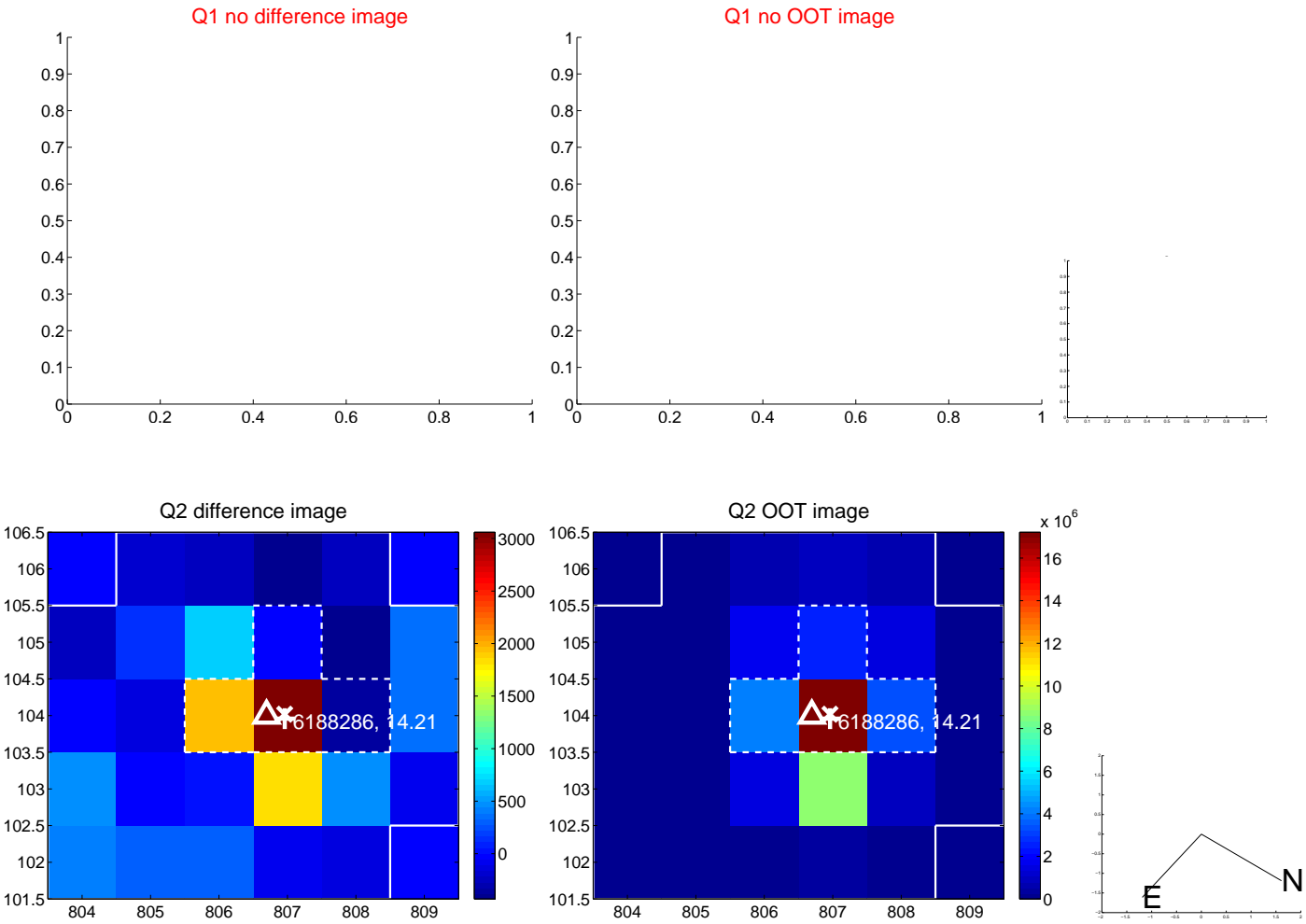


offset from photometric centroids



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

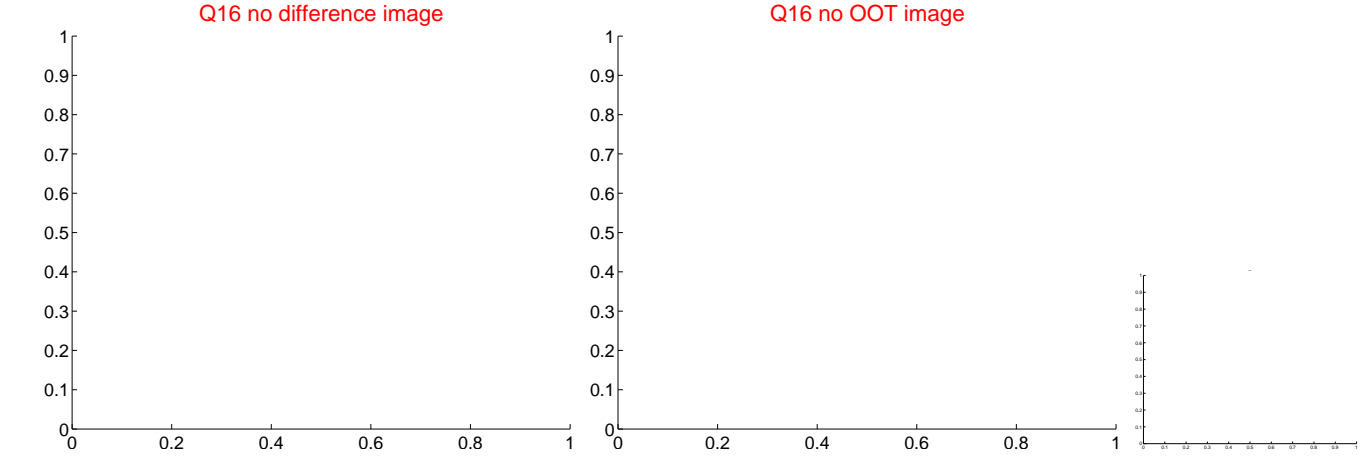
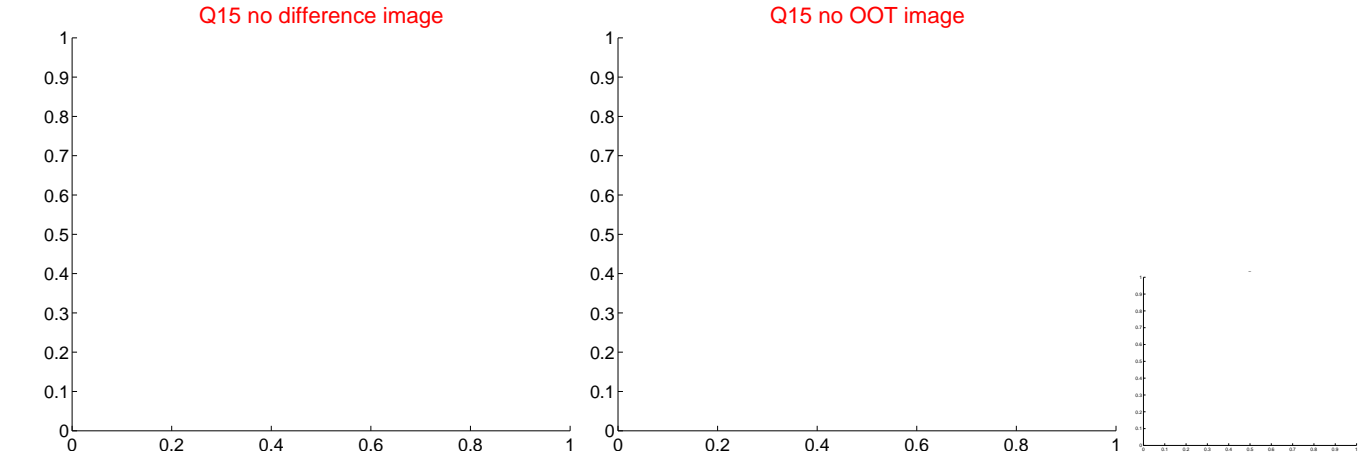
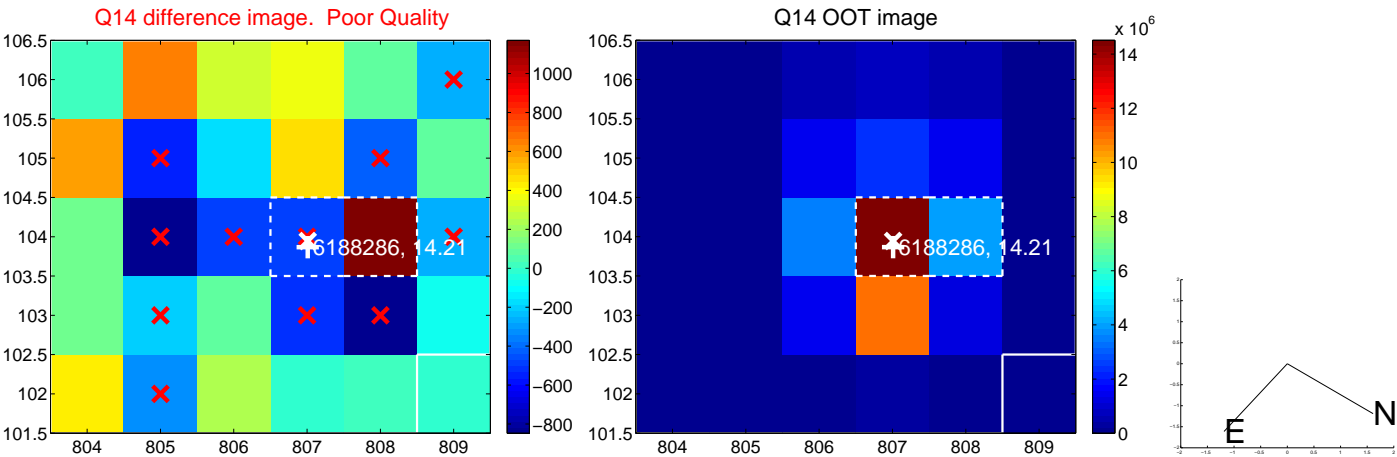
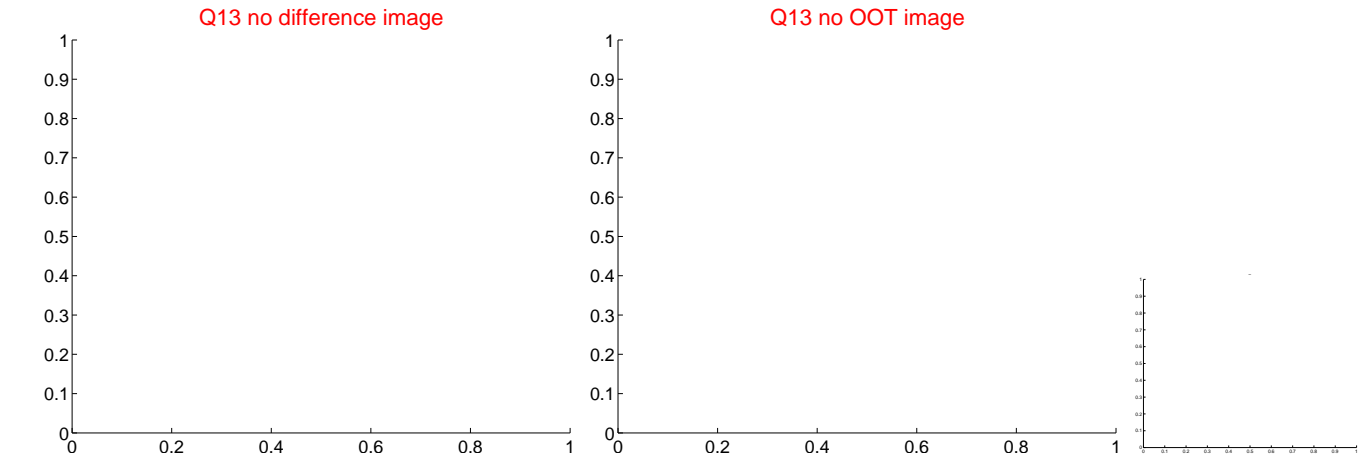




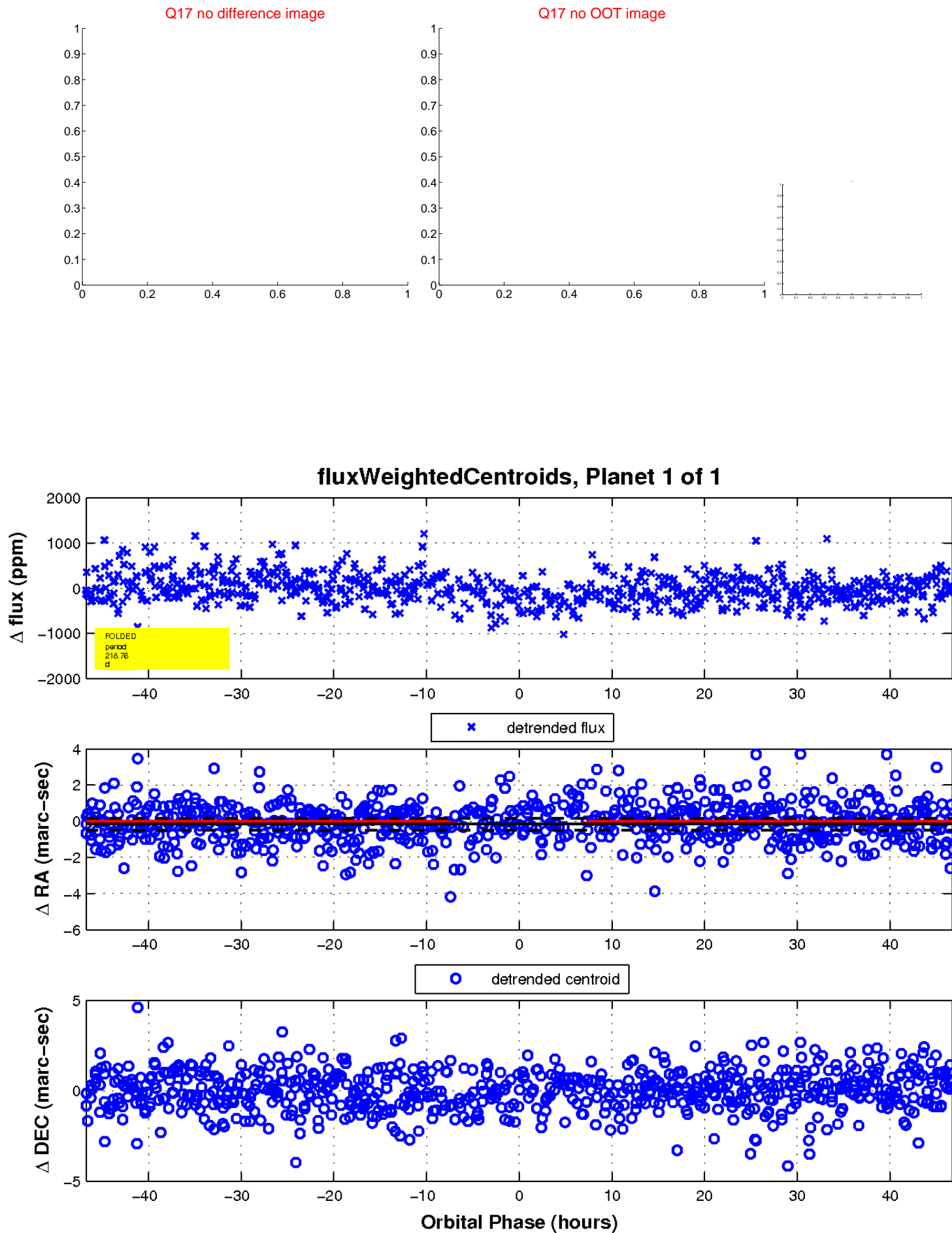
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

